DOCUMENT RESUME

ED 177 314 CE 022 642

AUTHOR Carvell, Fred; And Others
TITLE Technical Report on Research to Identify, Analyze, and Disseminate Information about Opportunities for Males and Females in Nontraditional Occupations. July 1978 through June 1979.
INSTITUTION Carvel Education Management Planning, Inc., Los Altos, Calif.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.; California State Dept. of Education, Sacramento. Div. of Vocational Education.
PUB DATE Jun 79
NOTE 43p.; Some of the appendix materials may not reproduce well due to thin print

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Attitudes; *Employment Opportunities; Employment Patterns; Employment Statistics; Enrollment; Enrollment Influences; *Equal Education; Higher Education; Information Dissemination; *Nontraditional Occupations; Occupational Guidance; Program Improvement; Secondary Education; Sex Discrimination; *Vocational Counseling; *Vocational Education
IDENTIFIERS *California

ABSTRACT

This project was conducted to improve the quality and availability of information pertaining to opportunities in nontraditional occupations for use by teachers, counselors, and interested students. The major project objectives were (1) to review current employment patterns in California to identify nontraditional occupations; (2) to collect and analyze useful information about the possible and extraordinary job demands related to psychological, social, and physical requirements of nontraditional occupations; and (3) to assemble the information revealed by the research into a helpful format suited for use by teachers, counselors, and interested students. Provisions were made for collecting both factual and attitudinal information from educators, students, employers, and employees. Factual data were related to employment statistics and enrollment data for vocational programs in secondary schools and community colleges. Attitudinal information was related to ideas and opinions obtained from persons interviewed. All major study objectives were attained within the timeline and resources allocated. (Appended are sample interview guides, statistical data, lists of participants, a sample copy of reviewer comment sheet, and a sample copy of the dissemination brochure for the guidebook.) (BM)

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TECHNICAL REPORT ON RESEARCH TO IDENTIFY, ANALYZE, AND DISSEMINATE INFORMATION ABOUT OPPORTUNITIES FOR MALES AND FEMALES IN NONTRADITIONAL OCCUPATIONS

(Subpart 3 Project No. 12346-3-8-804)
July 1978 through June 1979

The activity which is the subject of this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

Prepared for: California State Department of Education, Vocational Education Unit

Prepared by: Carvell Education Management Planning, Los Altos, CA

- Fred Carvell, Project Director
- Joan Barnes Carvell
- Charlet Holzkamper
- Patrick Vann

June 1979

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CARVELL Education Management Planning
Post Office Box 531, Los Altos, California 94022 (415) 941-9118

RESEARCH TO IDENTIFY, ANALYZE, AND DISSEMINATE INFORMATION ABOUT OPPORTUNITIES FOR MALES AND FEMALES IN NONTRADITIONAL OCCUPATIONS

Introduction

Social change has altered traditional work roles for men and women. This change has had major implications for vocational education at all levels because of the increased demand it has placed on providing more systematic career guidance information and giving more attention to sex equity in vocational program materials and methods of instruction.

When this study began in June 1978, there were few curriculum materials or counseling guides that addressed nontraditional occupations in a comprehensive manner. Fortunately, material for classroom and counseling use has been developed during the past year. This research project was initiated because of the lack of adequate information for teachers, counselors and students about opportunities and potential problems of preparing for and entering a nontraditional career. As a result of this project, a student guidebook was developed and produced. Although it is only one of several such materials developed, it is unique in that it addresses issues and circumstances found in California.

This technical report contains highlights of the procedures and the processes used to develop the student guidebook and provides for the staff of the State Department of Education, Vocational Education Unit, a broader background for the rationale to the approach used to select the content and format in the guidebook.

Project Goals and Objectives

The primary goal of this project was to improve the quality and availability of career guidance information for use by teachers, counselors, and interested students regarding opportunities in nontraditional occupations.

Related to this goal were three project objectives.

1. To review current employment patterns in California to identify nontraditional occupations.

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2. To collect and analyze useful information related to the possible and extraordinary job demands related to psychological, social, and physical requirements of nontraditional occupations.

3. To assemble the information revealed by the research in a helpful format suited for use by classroom educators, counselors and interested students.

Study Procedures

Study procedures included provisions for collection of both factual and attitudinal information from educators, students, employers and employees. Factual data were related to employment statistics and enrollment data for vocational programs in secondary schools and community colleges. Attitudinal information was related to ideas and opinions obtained from persons interviewed.

Study activities were divided into several phases.

Phase 1: Study Plan Approval and Agreement on Definitions

Early in the study, liaison was established between the study team and the project monitor appointed by the State Department of Education (SDE). During this phase, potential resource persons were identified from sex equity projects that were being undertaken in the State and elsewhere. A list of potential employers, public and private agencies dealing with nontraditional employment issues, and labor representatives was developed. Patterned interview forms were developed for use in contacts with educators, students, employers and other public agency representatives, and nontraditional employees. Facsimiles of these forms are contained in Appendix A.

In addition to the agreement about study procedures, a definition of vocational programs considered to be nontraditional was established. It was agreed that for purposes of this research project, the U.S. Office of Education guideline for nontraditional vocational education programs would be used; that is, a vocational education program is nontraditional for a person when 80 percent or more of the other students enrolled are of the opposite sex.

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The definition of a nontraditional occupation was not critical to data collection, but the following guideline was used to identify occupations: a nontraditional occupation for a person is one in which the vast majority of persons in the same occupation are of the opposite sex.

Although both of these definitions may change over time, they were a satisfactory frame of reference for this study.

Phase 2: Collection of a Statistical Data Base

During this phase, hard data on employment patterns and enrollment in vocational programs were gathered and analyzed. The source of employment statistics was the State Employment Development Department (EDD). At the time, the most comprehensive and recent employment information for purposes of this study was contained in a report prepared by the EDD, Employment Data and Research Unit.[1/]

Employment data revealed that during the mid-1970's, California's work force was made up of about 8.4 million men and women over the age of 16. The number of employed persons was about 7.5 million persons in eleven major occupational groups. Appendix B contains a summary of the number of persons employed in each major occupational group and in selected occupations that comprise each major occupational category. Along with this information, the number of women employed in each occupational group was computed so that their percent in the occupational work force could be determined. The data show that nearly 38 percent of the total employed work force in California was women. If all occupations were equally open to men and women, about the same proportion of women would be found in them as there is in the overall work force. Such is not the case.

Nontraditional Occupational Opportunities for Women. Within the occupational groups and a few of the related occupations for each group

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1/ "California Manpower Information for Affirmative Action Programs," (Tables 25A and 26A), Nov. 1976.

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there appear to be several occupations which offer the greatest opportunity for nontraditional employment for women, these are:

- Most occupations in the professional, technical, and related category (except health workers and teaching)
- All jobs related to management and administration
- Non-retail sales jobs, especially in wholesale trade, industrial, and technical products
- All construction, crafts, and related trade occupations
- Jobs in the transportation industry as drivers and equipment operators
- Laboring jobs
- Farm managers and farm operators
- In protective services such as fire fighters and police officers.

Nontraditional Occupations for Men. The list of nontraditional employment fields for men is more limited than those for women because men hold a larger share of the jobs in most fields. There are, however, opportunities in the following occupations:

- Medical and health workers (nurses, nurse aides and other related occupations)
- Teaching below the college level, especially in lower grades and in early childhood education
- Retail sales and merchandising fields
- All clerical occupations
- Service occupations related to food and personal services
- Private household workers
- Fashion industry
- Airline flight attendants.

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The review of nontraditional occupational opportunities in California (and the Nation) indicates that opportunities for women in nontraditional fields are more numerous and higher paying. Some of the nontraditional career options for men and women require college education; nearly all require some specialized vocational training.

Nontraditional Vocational Education Programs. At the time of this study the most recent available enrollment data were for the 1976-77 school year. Vocational program enrollments reported to the State Department of Education on form VE-48 were analyzed so that statewide patterns could be identified. Using the U.S. Office of Education guideline for identifying nontraditional programs, 32 programs were nontraditional for men and 70 were nontraditional for women.

The number of nontraditional vocational programs in each subject area (Agriculture, Health, etc.) for men and women is shown on Table 1. Details on the program titles under each major subject area are shown in Appendix C.

At the conclusion of this study phase, it was determined that factual information on employment patterns and vocational programs that are nontraditional should be included in the guidebook that was to be developed as part of the project.

Phase 3: Field Work and Attitudinal Data Analysis

Once basic statistical data had been compiled and synthesized, field work and attitudinal information collection procedures were initiated. Patterned interviews and contacts with a wide variety of schools, employment related groups, and special programs involved with sex equity and nontraditional employment were undertaken. The pattern of contacts made by the study team during the project is outlined below. See Appendix D for a list of the individual contacts made during the study.

- 20 secondary school districts
- 4 regional occupational programs/centers or skill centers
- 6 community colleges

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Table 1

NONTRADITIONAL VOCATIONAL EDUCATION PROGRAMS
ENROLLING OVER 500 STUDENTS
IN EITHER OR BOTH COMMUNITY COLLEGE AND SECONDARY SCHOOLS
AND HAVING OVER 80 PERCENT OF ONE SEX

USOE Code	Program Area	Number of Programs Nontraditional					
		Male			Female		
		Secondary	Community College	Total	Secondary	Community College	Total
01.	Agriculture	--	--		2	5	5
04.	Distributive	2	2	2	--	--	--
07.	Health	6	9	10	--	--	--
09.	Home Economics	2	4	4	--	--	--
14.	Office	11	6	11	--	--	--
16.	Technical	--	1	1	3	15	16
17.	Trade & Industry	4	3	4	45	45	49
	Total	25	25	32	50	65	70

Source: Compiled by Carvell Education Management Planning, from student enrollment data for 1976-77, VE-48 forms.

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- 20 employers or employment related agencies
- 15 special programs or projects related to nontraditional employment or sex equity.

During contacts with employment firms, interviews were conducted with 15 men and women who held nontraditional jobs in order to learn about their ideas and problems related to their career choices. The latter information was placed into three broad categories by the study team.

- Self-image of the nontraditional employees
- Life on the job as it relates to co-workers
- Preparation for nontraditional employment.

Employers were asked what they looked for when hiring nontraditional employees and what steps they had taken to help such employees adjust to the work environment.

Educators and students in the schools and community colleges that were contacted were asked about the problems they had experienced in nontraditional vocational education programs.

Information from these diverse sources was then organized as the content for a written manual which was to be the major product of this project.

Phase 4: Development of a Student Guidebook

After analyzing the factual and attitudinal information that had been collected, the study team developed a written manual containing information believed to be useful for teachers, counselors, and interested students. With the approval of the project monitor, the primary target for the written manual was deemed to be the student. Even though it was learned that teachers and counselors would benefit from having information about nontraditional occupations, the use of students as the target population for the guidebook would not preclude teachers and counselors from learning about the material covered.

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The factual and attitudinal information gathered during the study was organized and assessed for importance so that it could be included in the student guidebook. Five major topical areas were deemed critical.

1. Background on the current importance of sex equity, nontraditional career choices, and legislation related to sex discrimination.
2. Understanding the definitions related to nontraditional occupations, nontraditional vocational educational education programs, and the role of sex stereotyping in affecting choices at school and at work.
3. An overview of California employment patterns highlighting nontraditional employment opportunities and trends.
4. An overview of nontraditional vocational education patterns in the State showing the greatest opportunities for men and women.
5. Comments and ideas from employers, knowledgeable persons in the field of sex equity and nontraditional employment, and nontraditional job holders.

Once the topical areas to be included in the student guidebook were determined, the study team designed a mode of presentation that would have the following characteristics.

- Short units that could be read in a self-paced manner by students.
- A sequence of topics that would help the reader learn about factual information while becoming involved in value clarifying exercises and increased awareness of career planning options.
- A format including learning aids that would help readers reinforce what they had learned and help them extend what they had learned to their own career planning efforts.
- A mode of presentation that could be used in a classroom setting or counseling situation by individual students or in small groups.

Using the foregoing criteria, the study team wrote the first draft of a student manual. This draft was submitted to a panel of reviewers who were asked to provide critical comments and suggestions on format and content. A copy of the Reviewer Comment Sheet that was used to collect information is shown in Appendix E. Persons who served as reviewers were

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- Shirley Bailek, Community Advisement Center, Monterey Peninsula College
- Chester Gromacki, District Director of Vocational Education, North Orange County Community College District
- Leslie Hoffman, Student, Mountain View-Los Altos High School District
- Kathleen McDannel, Assistant Dean Vocational Education, Cerritos College
- Sheryl Pomerenk, Labor Market Analyst, San Mateo County Regional Occupational Program
- Kay Ragan, Associate Dean Student Activities, Mt. San Antonio College
- Lois Whisler, Special Projects, Kern Joint Union High School District.

In addition to content and format reviews, the text material was reviewed for sex fairness using the guidelines of the U.S. Office of Education.[1/] The reading level of the material was reviewed to insure that it was suitable for persons with a tenth grade reading ability.

Upon receipt of the reviewer comments and suggestions, a final version of the student guidebook was written, entitled, Choices and Challenges -- A Student Guidebook About Nontraditional Career Opportunities. The student guidebook was divided into 13 units, each containing learning aids and self-awareness exercises. Topics covered in each unit are as follows.

1. A Few Words to the Students Using This Guide
2. Let's Begin with You
3. What's Behind the Growth in Nontraditional Occupations?
4. Laws That Protect You from Sex Discrimination
5. For Thought and Discussion: Equal Employment Opportunity Cases
6. The Choice of Work, Life Styles, and Sex Roles
7. Opportunities in Nontraditional Employment for Men and Women
8. Nontraditional Employment Patterns
9. What Employers Say They Want
10. New Directions--New Occupational Options

1/ Guidelines for Sex-Fair Vocational Education Materials, Women on Words and Images, Bureau of Occupational and Adult Education, U.S. Office of Education, 1979.

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11. Preparing for a Nontraditional Career
12. Other Options for Nontraditional Career Preparation and Entry
13. Where Do You Go from Here?

Before the final manuscript of the student manual was sent to the printers for production, it was reviewed by an administrator of the State Department of Education, Vocational Education Unit.

Phase 5: Dissemination Plan

In accordance with the original project proposal, 250 or more copies of the final printed student guidebook were delivered to the State department of Education for distribution to interested schools and community colleges. To facilitate the distribution process, the study team designed and delivered a photo-ready copy of a brochure that can be used to order copies of the guidebook from the Vocational Education Unit. Photo-ready plates used in the production of the guidebook were given to the project monitor for use in printing more copies of the guidebook should demand warrant further production. See Appendix F for a sample of the copy used in the brochure.

Concluding Statement

With the cooperation of the State Department of Education, Vocational Education Unit, staff and project monitor as well as those persons from schools, community colleges, labor groups, employers, employees, and special projects who provided information for this applied research project, all major study objectives were attained within the timeline and resources that were allocated. The resultant student guidebook should fill an important need for both educators and students who are interested in improving the information base with which to make career choices that relate to nontraditional occupations. On a personal and professional level, the study team was pleased and proud to have been a part of the effort made by the State Department of Education and the California Community College Chancellor's Office to address the issues related to improvement of opportunities for students in nontraditional vocational education programs.

Appendix A

SAMPLE INTERVIEW GUIDES FOR NONTRADITIONAL PROJECT CONTACTS WITH:

- Students
- Educators (Schools and Community Colleges)
- Employers
- Nontraditional Employees

NONTRADITIONAL OCCUPATION
INTERVIEW GUIDE FOR NONTRADITIONAL
STUDENTS

Name of school/college:_____

Location:_____

Name of Student:_____

Age:_____ Sex: Female Male Present grade:_____

Name of course/program:_____

Telephone:_____

Date of contact:_____ Study Team Member:_____

---

1. How long have you been enrolled in this course? (semesters,etc.)_____
   What is the duration of the course? _____
2. How did you hear about this course? (friend, counselor, etc.)_____
3. What factors helped you to decide to take this course? _____
   _____
4. Who helped you make the decision to take this course?

	Male	Female
Parents	____	____
Other family member	____	____
Another student	____	____
Counselor	____	____
Teacher	____	____
Administrator	____	____
Someone working in the field	____	____
Reading materials	____	____

5. Before taking this course, did you know what it was about and what you would be expected to learn or do in the class? ____Yes ____No. Explain answer.
   _____
   _____
6. Are there any special problems you encounter with other students being a man/woman in this course? ____Yes ____No. If Yes, describe.
   _____
   _____
7. Are the instructional materials/methods used in this course suited to both men and women taking the course? ____Yes ____No. If No, explain.
   _____
   _____

8. Does the your program include work experience, internship, apprenticeship, etc.

____Yes ____No. If Yes, how well does this experience prepare you to deal with the problems of being in a nontraditional occupation? _____

_____

9. Since being in the course have you received any special assistance related to learning the things you are expected to do in the course? ____Yes ___No. If Yes, describe such help and rate how effective it has been:

_____

_____

_____

10. Do you have an idea of the type of job or occupation you would like to pursue when you are ready to go to work? ____Yes ____No. If Yes, is this course a help in preparing you for it? ____Yes ____No. Explain answer.

_____

_____

11. Would you like more information on the job possibilities and problems men/women encounter in the nontraditional occupation which you are interested in?
____Yes ____No. If Yes, what sort of information would you like?

_____

_____

12. What personal characteristics do you think are important for a man/woman to possess in order to succeed in the vocational program or occupation you are preparing for?

_____

_____

13. Do you believe your goals in taking this course are the same as most students in the class? ____Yes ____No. If No, how do your goals differ?

_____

_____

14. Why did you take this course? ____Interest ____To get a job ____Friend in the class
____Subject related ____jobs pay better ___Other_____

15. Do you plan to take a job in a field related to this course? ___Yes ___No. If Yes, how long do you intend to work in this field?

____less than 6 mos. ____6 mos.-1 yr. ____1-2 yrs. ____over 2 yrs.

Comments:

_____

_____

_____

NONTRADITIONAL OCCUPATION
INTERVIEW GUIDE FOR SCHOOLS & COLLEGES

Name of school/college:_____

Location:_____

Mailing Address:_____

_____Zip_____

Name of person interviewed:_____

Position/Title:_____

How long in position:_____ Highest degree: _____Yr. Rec._____

Age: –30 30/40 40/60 +60 Sex: Female Male

Name of Course/program:_____

Current student enrollment: Total_____ Females_____ Males_____

Telephone Work:_____ Other_____

Date of contact:_____Study Team Member:_____

---

1. How long has this course been taught? (When Started:_____)
2. What has been the usual proportion of men/women students enrolled during the time that the course has been offered?

   Two Years Ago (1976-77) This Year (1978-79)

   _____ _____
3. What occupations/jobs does this course prepare students for? (DOT No. ?)

   _____ _____

   _____ _____
4. What has been the experience of students in general in finding jobs in the occupations for which this course prepared them? Is a student follow-up available? Yes/No.

   _____

   _____
5. Is the job placement experience of men/women different? If Yes, how so?

   _____

   _____
6. Is there a special effort made to recruit minority sex students for this course? Yes/No. If Yes, describe.

   _____

7. Is there a special budget for this course/program because of the effort described in # 6 above? Yes/No. If Yes, what was the allocation? Has it been adequate/effective?

8. Are there particular problems of instruction or classroom activities because of mixed sexes in the course? Yes/No. If Yes, describe.

9. Are there particular learning problems that students of the minority sex encounter in this course? Yes/ No. If Yes describe.

10. Are the instructional materials available in the course suited or adapted to students of the minority sex? Yes/No. If there are problems, explain.

11. What liaison with the counseling personnel do you maintain in order to provide them with information about the course because of the nontraditional enrollment?

12. What information would be helpful to you (in printed form) to answer questions for students about nontraditional occupations?

13. What characteristics (personal or otherwise) do you believe are important for men/women enrolled in a nontraditional occupation program?

14. Other comments/suggestions.

Would be willing to field test manual. _Yes

NONTRADITIONAL OCCUPATIONS
INTERVIEW GUIDE FOR EMPLOYERS/AGENCIES

Name of firm/agency:_____

Mailing address:_____

_____ZIP_____

Name of person interviewed:_____

Age:_____30-40 ____40-50 ____50+ Sex:___Male ___Female

Position title:_____ Length of time with firm:_____

Telephone (work):_____ Other:_____

Date of contact:_____ Study Team Member:_____

---

1. What are the occupations in this organization for which men/women are presently in a significant minority? (How many or what percent of jobs are held by minority sex?)

   _____ _____

   _____ _____

   Does this reflect a significant change over the last two years? ___Yes ___No
   If Yes, has the change been a planned one? ___Yes ___No. Elaborate.

   _____

   _____

2. Is your firm trying to find members of the minority sex to fill such nontraditional occupations? ___Yes ___No. If Yes, what steps are being taken?

   _____

   _____

3. What problems has your firm had in finding men/women to fill nontraditional occupations in your organization?

   _____

   _____

4. Once a man/woman has been hired, what special steps are taken to provide orientation, training, counseling, or other assistance, to make that person an effective employee in a nontraditional occupation?

   _____

   _____

5. How are (or are) such orientation/training programs etc. for nontraditional employees evaluated for effectiveness?

   _____

   _____

   What use is made of this information?

   _____

6. Is there any program to help supervisors learn to deal, or deal better, with nontraditional employees? ____Yes ____No. If Yes, how is this program measured for successfulness?

_____

7. What characteristics (personal or otherwise) do you look for when considering a man/woman for a nontraditional occupation in your firm?

_____

8. What special problems do you believe men/women face in taking a nontraditional occupation in your firm?

_____

_____

9. Does your firm have stated goals dealing with increasing men/women in nontraditional occupations? ___Yes ___No. If Yes, what are they?

_____

10. What experience have you had with training programs in secondary schools or community colleges that have helped fill the need for qualified nontraditional employees? Name of such schools or colleges.

_____

_____

11. What would you suggest that young men/women who are now in school do to prepare themselves for nontraditional occupations?

_____

_____

_____

Comments:_____

_____

_____

_____

NONTRADITIONAL OCCUPATION
INTERVIEW GUIDE FOR EMPLOYEES

Name of Firm: _____

Location: _____

_____ Zip _____

Nontraditional Job Title: _____

Type of firm/agency: _____

Total number of employees in firm: _____

Approximate number of jobs (same type as held by interviewee): _____
Approximate number of jobs held by men: _____ women: _____

Telephone Work: _____ Other: _____

Date of Contact: _____ Study Team Member: _____

---

1. How long have you held your present (nontraditional) job? _____

2. What prior job experience did you have? (type of jobs, duration, etc.)

_____ _____

_____ _____

_____ _____

3. Did your prior work experience provide you with necessary skills for your present job? Yes No. Explain.

_____

_____

4. Prior to taking this job, did you take a training course or program to prepare you for it? Yes/ No. If Yes, describe where, when, and nature of training.

_____

_____

_____

5. Since taking this job, have you received any training or orientation programs designed to make your adjustment to the job easier? ___Yes ___No
If Yes, did it do what it was supposed to do? ___Yes ___No. Explain.

_____

_____

Is there anything else that might have helped you? _____

_____

6. Are there special problems with being a man/woman in a job that is traditionally held by members of the opposite sex? If so, describe such problems.

7. Describe the general treatment you receive from other workers of the opposite sex. Same sex in other jobs that are more traditional.

8. What do you consider to be the greatest benefits or rewards of the job you hold?

9. What do you consider to be the greatest problems or drawbacks to being a man/woman in this occupation?

10. What, if any,training you received in school helped to prepare you for this job?

11. What or who were influences in your decision to enter this occupation?

12. What personal characteristics do you believe are important to success in this this job?

13. What or who has been the greatest help since you took this job?

14. Other comments:

Appendix B

Table B-1

EMPLOYED WOMEN AS A PROPORTION OF THE EMPLOYED POPULATION IN CALIFORNIA IN SELECTED OCCUPATIONS AND GROUPS

Table B-1

EMPLOYED WOMEN AS A PROPORTION OF THE EMPLOYED POPULATION IN CALIFORNIA IN SELECTED OCCUPATIONS AND GROUPS

Selected Occupation(s) and Groups	(1) State Total Employed (thousands)	(2) Employed Women (thousands)	(3) Women as a % of Total
State Total Employed in all Occupations	7,485 1/	2,835	37.9%
Number Employed in Occupational Groups:			
1. All Professional, Technical, and and Related	1,303	477	34.3%
1.1 Engineers - Technical workers	(180) 2/	n.a.	--
1.2 Medical and Health	(128)	(116)	90.6
1.3 Teachers (elementary & secondary)	(241)	(166)	68.9
1.4 All others combined	(754)	(195)	25.9
2. All Managers & Admininstrators	696	132	19.0%
2.1 Manufacturing	(107)	n.a.	--
2.2 Retail	(118)	n.a.	--
2.3 Self-employed	(136)	n.a.	--
2.4 All others combined	(335)	n.a.	--
3. All Sales Workers	596	226	37.9%
3.1 Manufacturing (wholesale trade)	(126)	n.a.	--
3.2 Retail	(320)	(177)	55.3
3.3 Other sales workers	(150)	(49)	32.6
4. All Clerical and Related	1,480	1,105	74.7%
4.1 Bookkeepers	(165)	(138)	83.6
4.2 Secretarial and related	(413)	(400)	96.8
4.3 Other clerical workers	(902)	(567)	62.9

Table B-1 (continued)

Selected Occupations(s) and Groups	(1) State Total Employed (thousands)	(2) Employed Women (thousands)	(3) Women as a % of Total
5. All Craft Workers, Supervisors, & Related 3/	968	46	4.7
5.1 Auto Mechanics/Body repair	(87)	n.a.	--
5.2 Other Mechanics and repair	(156)	n.a.	--
5.3 Machinists	(43)	n.a.	--
5.4 Metal crafts	(53)	n.a.	--
5.5 Carpenters	(68)	n.a.	--
5.6 Construction workers	(168)	n.a.	--
5.7 Other craft	(393)	n.a.	--
6. All Operative Workers	774	275	35.5%
6.1 Manufacturing	(517)	(206)	39.8
6.2 Nonmanufacturing	(257)	(69)	26.8
7. All Transportation Operatives	252	11	4.5%
7.1 Truck drivers	(108)	n.a.	--
7.2 Other equipment operators	(144)	n.a.	--
8. All Laborers (except farm)	308	21	6.8%
8.1 Construction	(47)	n.a.	--
8.2 Freight/Materials handlers	(120)	n.a.	--
8.3 Others (except farm)	(141)	n.a.	--
9. All Agricultural Workers	162	22	13.6%
9.1 Farmers and farm managers	(45)	(3)	6.7
9.2 All others combined	(117)	(19)	16.2
10. All Service Workers (except household)	855	434	50.8%
10.1 Cleaning service	(165)	(42)	25.5
10.2 Food service	(285)	(165)	57.9
10.3 Health services	(110)	(97)	88.2

Table B-1 (continued)

Selected Occupation(s) and Groups	(1) State Total Employed (thousands)	(2) Employed Women (thousands)	(3) Women as a % of Total
10.4 Personal services	(128)	(88)	68.7
10.5 Protective services	(99)	(5)	5.0
10.6 Others (except household)	(68)	(37)	54.4
11. All Private Household Workers	91	86	94.5%

Notes:

1. In order to simplify matters, all employment figures presented on this table have been rounded to the nearest thousand. For example, 7,485 means 7,485,000.
2. Figures in parenthesis () show the number of workers in one of the selected occupations that make up the major occupational group. It should be noted that all of the occupations making up a major group are not shown on this table.
3. Some of the job titles in this occupational group have been changed to remove the sex bias. For example, craft worker has been used instead of craftsmen.

Source: Information on this Table was taken from data compiled by the State of California Employment Development Department, Employment Data and Research Unit, "California Manpower Information for Affirmative Action Programs," (Tables 25A and 26A), Nov. 1976.

Appendix C

Table C-1

NONTRADITIONAL PROGRAMS IN CALIFORNIA HIGH SCHOOLS AND COMMUNITY COLLEGES ENROLLING 500 OR STUDENTS IN 1976-77

Table C-1

NONTRADITIONAL PROGRAMS IN CALIFORNIA HIGH SCHOOLS AND COMMUNITY COLLEGES ENROLLING 500 OR STUDENTS IN 1976-77

USOE* Code	Vocational Program Title	Nontraditional Program for: Males	Females
	AGRICULTURE:		
01.0300	Agriculture Mechanics		●
01.0301	Power Machinery		●
01.0303	Soil Management		●
01.0601	Forest Conservation		●
01.0700	Forestry Production		●
	DISTRIBUTIVE EDUCATION:		
04.0200	Apparel and Accessories	●	
04.0500	Floristry	●	
	HEALTH RELATED OCCUPATIONS:		
07.0101	Dental Assisting	●	
07.0102	Hygiene	●	
07.0301	Nursing	●	
07.0302	Practical Nurse	●	
07.0303	Nursing Assistant (Aide)	●	
07.0307	Home Health Aide	●	
07.0900	Misc. Health Occupations	●	
07.0904	Medical Assistant (office)	●	
07.0908	Food Service Supervision	●	
07.0999	Health Occupations Education	●	
	HOME ECONOMICS RELATED:		
09.0201	Care and Guidance of Children	●	
09.0202	Clothing Management, Production, and Services	●	
09.0204	Home Furnishings, Equipment, and Services	●	
09.0205	Institution and Home Management Supervision	●	
	OFFICE OCCUPATIONS:		
14.0401	Communications Systems Clerk	●	
14.0406	Reception and Information Clerk	●	
14.0700	Stenography, Secretary, and Related	●	
14.0701	Executive Secretary	●	
14.0702	Secretary	●	
14.0703	Stenographer	●	
14.0799	Stenography, Secretary Related Other	●	

*U.S.Office of Education program identification number.

Table C-1 (continued)

USOE Code	Vocational Program Title	Nontraditional Program for: Males	Females
14.0900	Typing and Related Occupations	●	
14.0901	Clerk Typist	●	
14.0999	Typist and Related, Other	●	
14.9900	Office Occupations, Other	●	
	TECHNICAL PROGRAMS:		
16.0100	Engineering Related Tech.		●
16.0103	Architectural Related Tech.		●
16.0104	Auto Technology		●
16.0106	Civil Technology		●
16.0106-02	Sanitation Tech.		●
16.0107	Electrical Technology		●
16.0108	Electronics Technology		●
16.0109	Electromechanical Technology		●
16.0111	Industrial Tech.		●
16.0113	Mechanical Tech.		●
16.0113-03	Mechanical Tech. Production		●
16.0199	Engineering Related Tech.		●
16.0503	Teachers Assistant, Primary	●	
16.0601	Commercial Pilot Training		●
16.0602	Fire and Fire Safety Tech.		●
16.0603	Forestry Technology		●
16.0699	Misc. Technology Education		●
	TRADE AND INDUSTRY:		
17.0100	Air Conditioning		●
17.0101	Cooling		●
17.0200	Appliance Repair		●
17.0300	Automotive Services		●
17.0301	Auto Body Fender		●
17.0302	Mechanics		●
17.0303	Auto Specializations		●
17.0399	Auto Services, Other		●
17.0400	Aviation Occupations		●
17.0401	Aircraft Maintenance		●
17.0500	Blueprint Reading		●
17.0600	Business Machine Maintenance		●
17.1000	Construction and Maintenance Trades		●
17.1001	Carpentry		●
17.1002	Electricity		●
17.1003	Heavy Equipment		●
17.1003-02	Heavy Equipment Operation		●
17.1004	Masonry		●
17.1005	Painting and Decorating		●
17.1007	Plumbing and Pipefitting		●
17.1008	Drywall Installation		●
17.1010	Roofing		●
17.1099	Construction and Maintenance, Other		●
17.1200	Diesel Mechanic		●
17.1300	Drafting		●
17.1400	Electrical Occupations		●

Table C-1 (continued)

USOE Code	Vocational Program Title	Nontraditional Program for: Males	Females
	TRADE AND INDUSTRY Continued		
17.1400	Electrical Occupations		●
17.1401	Industrial Electrician		●
17.1499	Electrical Occupations, Other		●
17.1500	Electronic Occupations		●
17.1501	Communications		●
17.1503	Radio-Television		●
17.1599	Electronic Occupations, Other		●
17.2200	Maritime Occupations		●
17.2300	Metal Working		●
17.2302	Machine Shop		●
17.2303	Machine Tool Operation		●
17.2304	Metal Trades Combination		●
17.2305	Sheet Metal		●
17.2306	Welding and Cutting		●
17.2306-03	Welding, Combination		●
17.2399	Metal Working, Other		●
17.2602	Cosmetology	●	
17.2700	Plastics Occupations		●
17.2801	Firemen and Firefighting Training		●
17.2903	Meat Cutter		●
17.3000	Refrigeration		●
17.3100	Small Engine Repair		●
17.3300	Textiles, Production and Fabrication	●	
17.3302	Tailoring	●	
17.3399	Textiles, Production and Fabrication Other	●	
17.3600	Woodworking Occupations		●
17.3601	Mill and Cabinetmaking		●
	Total Number of Nontraditional Vocational Programs	32	70

Source: Carvell Education Management Planning, from Student Enrollment Data for 1976-77, VE 48 Forms.

Appendix D

LIST OF SCHOOLS, AGENCIES, EMPLOYERS, AND OTHER KNOWLEDGEABLE PERSONS CONTACTED

- Secondary Schools
- Regional Occupational Programs/Centers
- Community Colleges
- Labor and Apprenticeship Representatives
- Employers and Other Agencies
- Special Programs and Projects

SECONDARY LEVEL SCHOOLS AND COMMUNITY COLLEGES

Azusa Unified School District
Azusa, California

Calipatria Unified
School District
Calipatria, California

Ceres Unified School District
Ceres, California

Davis Joint Unified
School District
Davis, California

Hanford Joint Union
High School District
Hanford, California

Hayward Unified School
District
Hayward, California

Lake Tahoe Unified
School District
South Lake Tahoe, California

Lodi Unified School District
Lodi, California

Long Beach Unified
School District
Long Beach, California

Lucia Mar Unified
School District
Arroyo Grande, California

Monterey Peninsula Unified
School District
Monterey, California

Oceanside Unified
School District
Oceanside, California

Oxnard Unified School District
Oxnard, California

Rim of the World School District
Lake Arrowhead, California

San Juan Unified School District
Carmichael, California

San Luis Coastal Unified
School District
San Luis Obispo, California

Santa Barbara High
School District
Santa Barbara, California

Santa Rosa Unified School District
Santa Rosa, California

Shasta Unified School District
Redding, California

Whittier Unified School District
Whittier, California

Fresno Metropolitan Regional
Occupational Program/Center
Fresno, California

John O'Connell Community
College Center
San Francisco, California

San Mateo County Regional
Occupational Program
Burlingame, California

Southeast Los Angeles
County Regional Occupational
Program (SELCO)
Norwalk, California

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cont'd

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SECONDARY LEVEL SCHOOLS AND COMMUNITY COLLEGES (cont'd)

Cerritos Community College
Mr. Richard Whiteman,
Dean of Vocational Education
Norwalk, California

College of the Desert
Dr. William R. Kroonen,
Chairman Occupational
Education
Palm Desert, California

Long Beach City College
Dr. Les Harris,
Dean Occupational Education
Long Beach, California

Monterey Peninsula College
Dr. Philip Nash,
Dean Instructional Planning
Monterey, California

Mt. San Antonio College
Mr. Irv Colt,
Dean of Vocational Education
Walnut, California

S. F. Community College
Skills Center
Mr.William H. Svabek,
Assistant Director
San Francisco, California

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LABOR/APPRENTICESHIP REPRESENTATIVES

California Department of Industrial Relations
Division of Apprenticeship Standards
Mr. Frank Taylor
Correctional Program Coordinator
San Francisco, California

California Department of Industrial Relations
Division of Apprenticeship Standards
Mr. Don Robinson,
Senior Apprenticeship Consultant
San Francisco, California

California Advisory Committee on Women in Apprenticeship
Ms. Justine Saufai, Director
San Francisco, California

Northern California Surveyors Joint Apprenticeship Committee
Mr. A.A. Pennebaker, Representative
Oakland, California

Operating Engineers Joint Apprenticeship Committee
Mr. Dave Rea, Administrator
Sloughouse, California

Women in Apprenticeship
Ms. Christine Niebel
Staff Counselor
San Francisco, California

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EMPLOYERS AND OTHER AGENCIES

Armco Steel Co.
Mr. Joe Sullivan
Fluid Pack Pump Division
Los Nietos, California

ARCO Corp.
Mr. Owen Carter
Human Resources Manager
Los Angeles, California

California Employment
Development Department
Ms. Joann Hoffman
Employment Data and
Research Division
Sacramento, California

California Employment
Development Department
Mr. Douglas Patino,
Deputy Director
Planning and Review Service
Sacramento, California

City of Los Angeles
Ms. Grace Davis,
Deputy Mayor
Los Angeles, California

General Telephone &
Electronics Co.
Mr. Donald Morinaka and
Mr. Keith Nicholson
Santa Monica, California

Levi Strauss & Co.
Mr. Sam Cardinal
Corporate Manager of Employment
San Francisco, California

Lockheed Missiles &
Space Co., Inc.
Mr. Ray Schneyer
Special Assistant to the
President
Sunnyvale, California

Rockwell International
Mr. Jim Haun,
Manager of Documentation
Downey, CAlifornia

Ron Saint Cyr
Mr. Myers Drum
Vernon, California

Security Pacific Bank, Inc.
Mr. Irv Margol,
Senior Vice President
Organizational Affairs
Los Angeles, California

Southern California Edison Co.
Dr. Dorothy M. Ford
Rosemead, California

Southern California Gas Company
Mr. Edward Gregory
Los Angeles, California

Southern Pacific Transportation Co.
Mr. L. C. Chapman
Assistant Manager of
Personnel and Employment
San Francisco, California

TRW Inc.
Mr. Pat Carmichael
Redondo Beach, California

United Air Lines
Mr. Dave Keefer
Management Employment Division
SanFrancisco, California

EMPLOYERS AND OTHER AGENCIES (cont'd)

Lockheed Missiles &
Space Co., Inc.
Ms. Ruby Sperber
Human Resources Program
Sunnyvale, California

Magic Mountain Park
Mr. Bruce Halverson
Valencia, California

Pacific Southwest
Air Lines, Inc.
Ms. Judy Kitten
Quality Control-
Air Maintenance
San Diego, California

U. S. Department of Forestry
Ms. Elaine Grinney,
Director
Civil Rights Division
San Francisco, California

Well's Fargo Bank, Inc.
Ms. Janet Wright
Vice-President Personnel
San Francisco, California

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SPECIAL PROGRAMS AND PROJECTS

Blue Collar Women
Ms. Wanita Williams
Coordinator
Sacramento, California

California Network on
Sex Equity
Dr. JoAnn Steiger, Director
Santa Monica, California

California Occupational
Information System
Mr. John Van Zant, Director
Sacramento, California

Career Planning Center
Ms. Dorothy Midgely,
Director
Los Angeles, California

City of San Diego Sub-Committee
on Nontraditional Jobs
Ms. Melinda Lassater,
Chairperson
San Diego, California

Equal Rights Advocates, Inc.
Ms. Joan Messing Graff,
Attorney
San Francisco, California

Los Angeles City Youth
Training and Employment Project
Los Angeles, California

Nontraditional Opportunities
Project
Dr. Orville E. Thompson,
Director
University of California-Davis
Davis, California

Project Equity
Dr. Lee Mahon,
Northern California Coordinator
San Mateo, California

Project Equity
Dr. Barbara Peterson, Director
California State University-Fullerton
Fullerton, California

San Diego County Commission
on the Status of Women
Ms. Lawren Smity, Project Director
San Diego, California

Sex Equity Project
Ms. Robin R. Heyeck, Coordinator
San Mateo Community College
San Mateo, California

The Conference Board, Inc.
Ms. Ruth Gilbert Shaeffer and
Ms. Edith F. Lynton
New York, New York

Women's Rights Project
American Civil Liberties
Union Foundation
Ms. Patricia Beyea and
Ms. Geraldine O'Kane
New York, New York

Woman's Way Project
Ms. Carol Pullen,
Co-Administrator
San Rafael, California

Appendix E

SAMPLE COPY OF THE
REVIEWER COMMENT SHEET

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REVIEWER COMMENT SHEET

Name of School/College: _____

Reviewer's Name: _____

Reviewer's Position: _____

Date Copy Provided to Reviewer: _____ Date Returned _____

You have been provided with a draft copy of the text of a student handbook entitled, CHOICES AND CHALLENGES. . .. The final handbook will be typeset and bound with illustrations, photographs and drawings appropriately incorporated in the manuscript. The final format and layout is yet to be designed. Your help in reviewing the text material is important in making the necessary revisions before final production of the handbook. Please read the draft copy and answer the questions on this review sheet. You may wish to have students and other teachers or counselors take a look at the manuscript and complete copies of this review sheet. We welcome their ideas and suggestions also. There are limited copies of this draft text, so we must request that it be returned along with your review. You may duplicate any part or all of the material you wish, but we need the copy you received back so that others can use it during the review process.

After reading the text material, please answer the following questions.

1. Is the topic of nontraditional occupations of interest to students?
   _____Yes _____No _____Don't Know

   Comments:

2. Do you think the student handbook covered topics and material of interest to most students?
   _____Yes _____No _____Don't Know

   Comments:

3. Are there other issues that you think should be considered in the handbook?
   _____Yes _____No If Yes, please list them.

4. Is the reading level of the material appropriate for students in your school, programs, or college?
   _____Yes _____No _____Don't Know

   Comments:

(over)

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5. Is the sequence of material appropriate to the topics being discussed?

_____Yes _____No _____Don't Know

Comments:

6. Do the review exercises provide a means of helping the reader to think about or understand the topics being covered?

_____Yes _____No _____Don't Know

Comments:

7. Do you believe the student handbook can be used by students in the following situations? (Check Yes in cases in which you agree.)

	Yes	Don't Know
.In a vocational course as a group	_____	_____
.As an individual assignment in a class	_____	_____
.As part of a group counseling class	_____	_____
.As a resource in a counseling center	_____	_____
.As a resource in a career center	_____	_____

8. Are there instructional or counseling uses you can suggest for this student handbook? (If so, list them here.)

9. How would you rate the overall quality of the material presented in the student handbook?

Comments: _____Good _____Satisfactory _____Poor

10. Specific suggestions for improving the student handbook: (Use additional sheets if necessary)

Would you like to receive copies of the final handbook when it is ready for distribution? If so, indicate the number of copies (up to 10) and attach a mailing label to this review sheet.

Appendix F

SAMPLE COPY OF BROCHURE FOR DISSEMINATION

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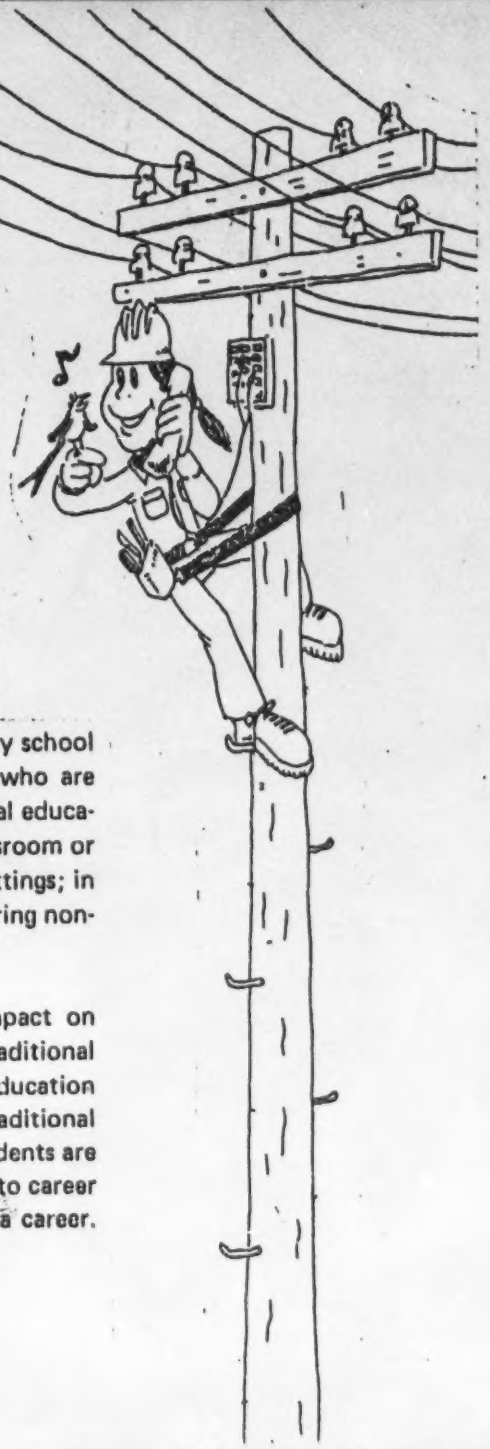
CHOICES AND CHALLENGES



A STUDENT GUIDEBOOK ABOUT NONTRADITIONAL CAREER OPPORTUNITIES

This new publication is designed for use by secondary school students, community college students, and adults who are considering a nontraditional occupation or vocational education program. It can be used with groups in the classroom or shop as a learning resource; in career counseling settings; in group discussions; or as an individual means of exploring nontraditional career options.

The content includes laws, Affirmative Action impact on hiring and promotion, employment trends, nontraditional occupation wage ranges, nontraditional vocational education programs in California, and field reports on nontraditional job opportunities by employers and employees. Students are helped to understand the relation of personal values to career choices and the role of education in preparing for a career.

Prepared under a contract with the
California State Department of Education
by Carvell Education Management Planning, Inc.
Los Altos, California

SECTION TITLES

"Choices and Challenges" has 13 easy-to-read sections, plus photographs and illustrations to keep the material interesting and informative.

Section titles are:

1. A Few Words to Students
2. Let's Begin With You
3. What's Behind the Growth in Nontraditional Occupations?
4. Laws That Protect You From Sex Discrimination
5. Equal Employment Opportunity Cases
6. Work, Life Styles and Sex Roles
7. Opportunities in Nontraditional Employment
8. Nontraditional Employment Patterns
9. What Employers Say They Want
10. New Directions — New Job Choices
11. Preparing for a Nontraditional Career
12. Other Options . . .
13. Where Do You Go From Here?

IN ADDITION . . .

Three types of aids are offered to help students understand what they have read:

Learning Aids — review questions, plus clear, in-depth answers.

Self Awareness Exercises — checksheets that relate the reader's values and ideas to occupational choices.

Case Studies — an opportunity for readers to compare their opinions about sex discrimination on the job with the experts.

CHOICES AND CHALLENGES

A Student Guidebook About Nontraditional Career Opportunities

California State Department of Education
Vocational Education Support Services
721 Capitol Mall, 4th Floor
Sacramento, CA 95814

Detach and Return Card

WE'RE INTERESTED IN NONTRADITIONAL CAREERS!

Please send _____ copies of CHOICES AND CHALLENGES – A STUDENT GUIDEBOOK ABOUT NONTRADITIONAL CAREER OPPORTUNITIES to the address listed below.

(Print or type)

NAME _____ POSITION _____

INSTITUTION _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Type of Institution: ☐ Secondary ☐ Community College ☐ Other

Mail this form to: Mr. Richard S. Nelson, Administrator
Vocational Education Support Services
California State Department of Education
721 Capitol Mall, 4th Floor
Sacramento, CA 95814
Attention: Sex Equity Coordinator

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